

CLAIMS

1. A wind-driven power-plant (10) comprising a rotor (12) fitted with at least one angularly adjustable rotor blade (14), further a generator which can be both connected directly or indirectly to the rotor (12) to generate electric power and connected directly or indirectly to an electric grid (25) to feed electric power to said grid, at least one rotor blade adjustment system which adjusts the angle of the rotor blade (14) and which is made up of at least one blade adjusting drive (20) fitted with at least one DC motor (23) that may be connected through a converter (24) to the electric grid (25), of a control unit (33) connected to the converter (24) and controlling and/or regulating the blade adjusting drive (20), and of a DC voltage source (31) assuring power supply to the blade adjusting drive (20) in the event of failure of the grid (25),

characterized in that

the DC voltage source (31) may be connected directly to the blade adjusting drive (20) or indirectly to it through the converter (24), the DC voltage source (31) being connected in priority manner indirectly through the converter (24) to the blade adjusting drive (20), the converter (24) being designed in a manner that to allow converting both the AC voltage from the grid (25) and the DC voltage from the DC voltage source (31).

2. Wind-driven power-plant (10) as claimed in claim 1, characterized in that the DC voltage source (31) shall be connected to the blade adjusting drive (20) only when the converter (24) fails.

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3. Wind-driven power-plant (10) as claimed in claim 1, characterized in that when connecting the DC voltage source (31) indirectly to the blade adjusting drive (20), said drive can be controlled by a malfunction mode which is stored in the control unit (33), or generated in the control unit (33), or fed into the control unit (33).

4. Wind-driven power-plant (10) as claimed in claim 1, characterized in that in the event the power-plant (10) is shut down, the electric grid (25) simultaneously has failed and the DC voltage source (31) is directly connected to the blade adjusting drive (20), the blade adjusting drive (20) can be controlled through the control unit (33) to start up the power-plant (10).

5. Wind-driven power in claim 1, characterized in that the DC voltage source (31) is a battery.

6. Wind-drive power-plant (10) as claimed in claim 1, characterized in that the converter (24) comprises a rectifier (27), an intermediate DC circuit (28) and a DC chopper controller with at least one active switch.

7. Wind-driven power-plant (10) as claimed in the preceding claim, characterized in that the active switch is an IGBT.

8. Wind-driven power-plant as claimed in one of the above claims, characterized in that the DC voltage source (31) can be connected to the DC voltage intermediate circuit (28).

9. Wind-driven power-plant (10) as claimed in claim 1, characterized in that the rotor blade adjustment system comprises at least one angle encoder (37, 38) determining the instantaneous angle of the rotor blade (14) and transmitting it to the control unit (33).

10. Wind-driven power-plant (10) preferably as claimed in claim 1, characterized in that the rotor blade adjustment system comprises at least two angle encoders (37, 38), the control unit (33) being designed in a manner that in the event of one angle encoder (37, 38) failing, said unit (33) shall switch ON the other angle encoder (37, 38).

11. Wind-driven power-plant (10) as claimed in the preceding claim, characterized in that the blade adjusting driver (20) comprises a drive side and an output/rotor-blade side, one of the angle encoders (37, 38) being mounted on the drive side and the other on the output/rotor-blade side of the blade adjusting drive (20).